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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,107	07/16/2003	Katsuaki Hosono	09852/000N062-US0	1074
7278	7590	01/05/2005	EXAMINER	
DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			TRIEU, THERESA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/622,107	<b>Applicant(s)</b> HOSONO, KATSUAKI	
	<b>Examiner</b> Theresa Trieu	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,8,9,15,16,22-30 is/are pending in the application.
- 4a) Of the above claim(s) 3-7,10-14,17-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,9,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 22-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>July 16, 2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is responsive to the applicants' election/Restriction filed on October 26, 2004.

#### ***Election/Restrictions***

1. Applicant's election with traverse of the species of Figures 1-3 is acknowledged, claims 1, 2, 8, 9, 15, 16 and 22-30 being readable thereon.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 8 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 8 and 15, the phrase "the two outer/inner tooth curve segments are separated by a predetermined distance" renders the claims indefinite, because it is unclear which distance is a predetermine that the two outer/inner tooth curve segments are separated and are smoothly connected to each other using a curve or a straight line, as applicants have claimed. Applicants should clarify/define the distance is predetermined.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1, 2, 8, 9, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosono et al. (Hosono) (Patent Number 5,876,193).***

Regarding claims 1, 8 and 15, Hosono (as shown in Fig. 10) discloses an oil pump rotor assembly comprising: an inner rotor (10) having "n" external teeth ("n" is a natural number); and an outer rotor (20) having (n+1) internal teeth which are engageable with the external teeth, wherein the tooth tip profile of the inner rotor is formed such that an epicycloid curve, which is generated by rolling a circumscribed-rolling circle along a base circle without slip, is equally divided into two at a midpoint thereof to obtain two outer tooth curve segments, and the two outer tooth curve segments are separated by a distance and are smoothly connected to each other using a straight line (see Fig. 10), wherein the tooth space profile of the inner/outer rotor is formed based on a hypocycloid/ epicycloid curve which is formed by rolling an inscribed-rolling circle along the base circle without slip, and wherein the tooth tip profile of the outer rotor is formed such that a hypocycloid curve, which is generated by rolling an inscribed-rolling circle along the base circle without slip, is equally divided into two at a midpoint thereof to obtain two inner tooth curve segments, and the inner tooth curve segments are separated by a distance and are smoothly connected to each other using a curve (see Fig. 10).

Regarding claims 2, 9 and 16, Hosono further discloses the separation of the two outer/inner tooth curve segments (not numbered; however, clearly seen in Fig. 10) is performed in such a manner that the two outer/inner tooth curve segments are moved along the circumference of the base circle.

***Allowable Subject Matter***

4. Claims 22-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Prior Art***

The IDS (PTO-1449) filed on July 16, 2003 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents: Rouverol (U.S. Patent Number 3,982,445), Saegusa (U.S. Patent Number 4,657,492), Cozens (U.S. Patent Number 5,163,826), Hansen (U.S. Patent Number 5,628,626), Hansen et al. (U.S. Patent Number 5,772,419), each further discloses a state of the art.

***Communication***

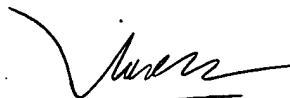
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3748

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT



Theresa Trieu  
Patent Examiner  
Art Unit 3748